

67,200-1151  
2003-0168

## CLAIMS

What is claimed is:

1. An arc chamber filament for an ion implanter, comprising:
  - a pair of parallel segments;
  - at least one winding filament unit carried by each of said pair of parallel segments; and
  - a bridge segment connecting said at least one winding filament unit of one of said pair of parallel segments to said at least one winding filament unit of an other of said pair of parallel segments.
2. The filament of claim 1 wherein said at least one winding filament unit comprises a first generally U-shaped winding filament unit carried by said one of said pair of parallel segments and a second generally U-shaped winding filament unit carried by said other of said pair of parallel segments.

67,200-1151  
2003-0168

3. The filament of claim 1 wherein said at least one winding filament unit of said one of said pair of parallel segments is substantially symmetrical with said at least one winding filament unit of said other of said pair of parallel segments.

4. The filament of claim 3 wherein said at least one winding filament unit comprises a first generally U-shaped winding filament unit carried by said one of said pair of parallel segments and a second generally U-shaped winding filament unit carried by said other of said pair of parallel segments.

5. The filament of claim 1 wherein said at least one winding filament unit of said one of said pair of parallel segments and said at least one winding filament unit of said other of said pair of parallel segments are generally coplanar.

67,200-1151  
2003-0168

6. The filament of claim 5 wherein said at least one winding filament unit comprises a first generally U-shaped winding filament unit carried by said one of said pair of parallel segments and a second generally U-shaped winding filament unit carried by said other of said pair of parallel segments.

7. The filament of claim 5 wherein said at least one winding filament unit of said one of said pair of parallel segments is substantially symmetrical with said at least one winding filament unit of said other of said pair of parallel segments.

8. The filament of claim 7 wherein said at least one winding filament unit comprises a first generally U-shaped winding filament unit carried by said one of said pair of parallel segments and a second generally U-shaped winding filament unit carried by said other of said pair of parallel segments.

67,200-1151  
2003-0168

9. An arc chamber filament for an ion implanter, comprising:

a pair of parallel segments;

at least two winding filament units carried by each of said pair of parallel segments; and

a bridge segment connecting said at least two winding filament units of one of said pair of parallel segments to said at least two winding filament units of an other of said pair of parallel segments.

10. The filament of claim 9 wherein said at least two winding filament units comprises a first generally U-shaped winding filament unit and a second generally U-shaped winding filament unit carried by said one of said pair of parallel segments and a third generally U-shaped winding filament unit and a fourth generally U-shaped winding filament unit carried by said other of said pair of parallel segments.

11. The filament of claim 9 wherein said at least two winding filament units of said one of said pair of parallel segments is substantially symmetrical with said at least two winding filament units of said other of said pair of parallel segments.

67,200-1151  
2003-0168

12. The filament of claim 11 wherein said at least two winding filament units comprises a first generally U-shaped winding filament unit and a second generally U-shaped winding filament unit carried by said one of said pair of parallel segments and a third generally U-shaped winding filament unit and a fourth generally U-shaped winding filament unit carried by said other of said pair of parallel segments.

13. The filament of claim 9 wherein said at least two winding filament units of said one of said pair of parallel segments and said at least two winding filament units of said other of said pair of parallel segments are generally coplanar.

14. The filament of claim 13 wherein said at least two winding filament units comprises a first generally U-shaped winding filament unit and a second generally U-shaped winding filament unit carried by said one of said pair of parallel segments and a third generally U-shaped winding filament unit and a fourth generally U-shaped winding filament unit carried by said other of said pair of parallel segments.

15. The filament of claim 13 wherein said at least two winding filament units of said one of said pair of parallel segments is substantially symmetrical with said at least two winding filament units of said other of said pair of parallel segments.

16. The filament of claim 15 wherein said at least two winding filament units comprises a first generally U-shaped winding filament unit and a second generally U-shaped winding filament unit carried by said one of said pair of parallel segments and a third generally U-shaped winding filament unit and a fourth generally U-shaped winding filament unit carried by said other of said pair of parallel segments.

17. An arc chamber filament for an ion implanter, comprising:

a pair of parallel segments;

at least three winding filament units carried by each of said pair of parallel segments; and

a bridge segment connecting said at least three winding filament units of one of said pair of parallel segments to said at least three winding filament units of an other of said pair of parallel segments.

18. The filament of claim 17 wherein said at least three winding filament units comprises a first generally U-shaped winding filament unit, a second generally U-shaped winding filament unit and a third generally U-shaped winding filament unit carried by said one of said pair of parallel segments and a fourth generally U-shaped winding filament unit, a fifth generally U-shaped winding filament unit and a sixth generally U-shaped winding filament unit carried by said other of said pair of parallel segments.

19. The filament of claim 18 wherein said first, second and third winding filament units of said one of said pair of parallel segments are substantially symmetrical with said fourth, fifth and sixth winding filament units of said other of said pair of parallel segments.

20. The filament of claim 18 wherein said first, second and third winding filament units of said one of said pair of parallel segments and said fourth, fifth and sixth winding filament units of said other of said pair of parallel segments are generally coplanar.